

**We Claim:**

1. A composition of matter comprising a microporous solid having a plurality of cells and a quantity of ethylene gas contained within one or more of the plurality of cells.
2. The composition of matter of claim 1 wherein one or more than one of the plurality of cells is an open cell.
3. The composition of matter of claim 1 wherein one or more than one of each of the plurality of cells has a closed cell configuration.
4. The composition of matter of claim 1 wherein the microporous solid is a crosslinked aminoplast foam.
5. The composition of matter of claim 1 wherein the microporous solid has a density of between 0.1 to 10 lb./cubic foot.
6. The composition of matter of claim 1 wherein the microporous solid is a nitrogenous microporous solid.
7. The composition of matter of claim 1 wherein the ethylene gas is able to be released from the cell over a period of time.
8. The composition of matter of claim 1 wherein the ethylene gas is able to be released from the cell by diffusion through a wall of the cells.
9. The composition of matter of claim 1 wherein the ethylene gas is able to be released by degradation of a wall of the cell.
10. The composition of matter of claim 9 wherein the wall of the cell is configured to degrade by the process of biodegradation.

11. The composition of matter of claim 7 wherein the microporous solid has a density and the density can be altered to change the rate at which ethylene gas is released from the cell.
12. The composition of matter of claim 7 wherein the microporous solid has a shape and the shape of the microporous solid can be manipulated to change the rate at which the ethylene gas is released from the permeable cell.
13. The composition of matter of claim 7 wherein the microporous solid has a size and the size of the microporous solid can be manipulated to change the rate at which the ethylene gas is released from the permeable cell.
14. The composition of matter of claim 1 wherein the microporous solid is a typical crosslinked urea-formaldehyde insulation foam.
15. A method for releasing ethylene gas into a botanical system, comprising:
  - providing a microporous composition comprising one or more cells containing ethylene gas therein;
  - applying the microporous composition to the botanical system; and
  - releasing the ethylene gas from the microporous composition onto the botanical system.
16. The method of claim 15 wherein providing a microporous composition further comprises preparing a microporous composition.
17. The method of claim 15 wherein the botanical system includes soil and in the applying step, the microporous composition is applied directly onto the soil.
18. The method of claim 15 wherein the botanical system includes soil and the microporous composition is applied into the soil.

19. The method of claim 15 wherein the botanical system comprises at least one tree having a branch, and the microporous composition is applied by suspending the microporous composition from the branch.
20. The method of claim 15 wherein the botanical system comprises at least one plant, and the microporous composition is applied directly onto the plant.
21. The method of claim 15 wherein the ethylene gas is released from the microporous composition by diffusing through the one or more cells.
22. The method of claim 21, wherein the ethylene diffuses from the microporous composition at a determined release rate.
23. The method of claim 22, wherein the release rate of the microporous composition is altered by changing the size of the microporous composition.
24. The method of claim 22 wherein the release rate of the microporous composition is altered by changing the shape of the microporous composition.
25. The method of claim 22 wherein the release rate of the microporous composition is altered by changing the density of the microporous composition.
26. The method of claim 26 wherein the prepared microporous composition is a microporous foam formed by combining ethylene gas with a foaming agent to form an intermediate composition, and mixing a resin to the intermediate composition foam.
27. A method of releasing ethylene gas from petrochemical sources directly to a botanical system comprising:

means for providing a microporous composition comprising one or more than one cell and a quantity of ethylene gas in one or more than one cell;

means for introducing the microporous composition into a botanical system;  
and

means for diffusing the quantity of ethylene gas from the microporous composition into the botanical system.